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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER				
GADDY, BENJAMINE				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/536,476

Applicant(s)

ROSSER ET AL.

Examiner

Benjamin E. Gaddy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 23 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-85/86)
Paper No(s)/Mail Date 5/23/2005
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "Response generator for human-computer conversation using natural language processing."

2. The attempted use of the trademark "Pokemon" has been noted in this application. Note that this trademark has been spelled incorrectly (as "Pokeman," see e.g. Col. 28, line 16) in the application in several locations. First, the trademark holders' rights should be respected by properly spelling the trademark. Second, it should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 112

3. Claims 6 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6 and 7 recite the limitation "said generating a response to a natural language query" in the first line of each. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 6, 7, 8, 10, 11, 16, 17, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strubbe (US 6,721,706) in view of Karaali (US 6,182,028).

Consider claims 1 and 11: Strubbe discloses an autonomous response method (**see Col. 8, lines 30-40, where Strubbe discusses an interaction simulator**), comprising: autonomously updating a statement-response database; (**see Col. 20, lines 45-55, where Strubbe discusses the response data is stored in the data store, therefore updating it**) and autonomously generating a natural language response to a received natural language input, (**see Col. 20, lines 40-55, where Strubbe discusses the response data is generated**) wherein said generating a response comprises following a conversation strategy, (**see Col. 19, lines 20-30, where Strubbe discusses the operation of the conversation simulator and describes the strategy**) choosing at least one context element from a database and (**see Col. 19, lines 40-50, where Strubbe discusses determining meaning from context**) searching said updated statement-response database (**see Col. 20, lines 34-40, where Strubbe discusses selecting appropriate data from the data store, therefore searching**).

Strubbe does not specifically disclose a context database, however Karaali discloses a context database (see Col. 4, line 64 – Col. 5, lines 10, where Karaali discusses a **tag-context knowledge database**). It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Strubbe, and use a context database as taught by Karaali, thus advantageously combining the processing of both local and expanded context, as discussed by Karaali (see Col. 2, lines 14-16).

Consider claims 6 and 16: Strubbe as modified by Karaali discloses generating a response to a natural language query further comprises: receiving said query as an electronic character stream (see Col. 20, lines 15-35, where Strubbe discusses **user input**); parsing said query into a statement (see Col. 20, lines 25-35, where Strubbe discusses a **parser**); generating a plurality of candidate responses appropriate to said statement by searching said statement-response database (see Col. 20, lines 20-25, where Strubbe discusses a **response generator**, and Col. 20, lines 34-40, where Strubbe discusses **selecting appropriate data from the data store, therefore searching the database**) ; choosing a best response from said candidate responses using said conversation strategy and said at least one context element taken from said context database (see Col. 20, lines 24-40, where Strubbe discusses **gathering intelligence about the conversation** and Col. 19, lines 20-30, where Strubbe discusses **the strategy**); outputting said best response as an electronic character stream (see Col. 26, lines 10-18, where Strubbe discusses **outputting to a display device, therefore using an electronic character stream**).

Consider claims 7 and 17: Strubbe as modified by Karaali discloses generating a response to a natural language query further comprises: receiving an input audio signal

corresponding to a human voice representation of said query; converting said input audio signal into a query represented by an electronic character stream (see Col. 20, lines 15-25, where Strubbe discusses text derived from speech, therefore receiving and converting); parsing said query into a statement (see Col. 20, lines 25-35, where Strubbe discusses a parser); generating a plurality of candidate responses appropriate to said statement by searching said statement-response database; choosing a best response from said candidate responses using said conversation strategy and said at least one context element taken from said context database (see Col. 20, lines 34-40, where Strubbe discusses selecting appropriate data from the data store, therefore generating and choosing); generating an electronic character stream representing a natural language version of said best response (see Col. 25, lines 60-68 where Strubbe discusses a template text); and, converting said electronic character stream into a synthetic speech signal corresponding to an audible version of said best response (see Col. 25, lines 60-68, where Strubbe discusses a text-to-speech conversion).

Consider claims 8 and 18: Strubbe as modified by Karaali discloses the context database includes an event result (see Col. 22, lines 36-50).

Consider claims 10 and 20: Strubbe discloses the conversation strategy comprises: scoring said query by assessing the level of language use in said query input to provide a metric of query sophistication (see Col. 17, lines 52-68); generating at least two candidate responses appropriate to said query (see Col. 20, lines 34-40); scoring said at least two candidate responses by assessing the level of language use in said candidate responses to provide a metric of response sophistication for each candidate response (see Col. 20, lines

34-40); choosing said candidate response having said metric of repose sophistication that most closely matches said metric of query sophistication (**see Col. 17**).

6. Claims 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strubbe (US 6,721,706) in view of Karaali (US 6,182,028) as applied to claim 1 and 11 above, and further in view of Johnson (US 6,567,805).

Consider claims 2 and 12: Strubbe and Karaali disclose autonomously loading content that matches at least one search criteria from a source formatted to be in human readable form; converting said downloaded publication content into at least one entry suitable for use in said statement-response database; and, storing said at least one entry in said statement-response database (**see Col. 20, lines 45-55, where Strubbe discusses the response data is stored in the data store, therefore updating it**).

Strubbe and Karaali do not specifically disclose downloading publication content, however Johnson discloses downloading publication content (**see Col. 8, lines 54-68, where Johnson discusses providing information from a website**). It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Strubbe and Karaali, and use downloading publication content as taught by Johnson, thus enabling a system to respond to a user query in the context of a dialog, as discussed by Johnson (**see Col. 1, lines 35-40**).

7. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strubbe (US 6,721,706) in view of Karaali (US 6,182,028) as applied to claim 1 and 11 above, and further in view of Dagtas (US 6,973,256).

Consider claim 3 and 13: Strubbe and Karaali disclose autonomously acquiring information, wherein said information matches at least one search criteria; transforming said information into at least one entry suitable for use in said statement-response database; and, storing said at least one entry in said statement-response database (**see Col. 20, lines 45-55, where Strubbe discusses the response data is stored in the data store, therefore updating it).**

Strubbe and Karaali do not specifically disclose acquiring an information stream from an audio-visual program, however Dagtas discloses acquiring an information stream from an audio-visual program (**see Col. 6, lines 26-44, where Dagtas discusses detecting spoken words in the audio track of a video program**). It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Strubbe and Karaali, and use acquiring an information stream from an audio-visual program as taught by Dagtas, thus allowing the detection of interesting events in a video program, as discussed by Dagtas (**see Col. 1, lines 60-68**).

8. Claims 4, 5, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strubbe (US 6,721,706) in view of Karaali (US 6,182,028) as applied to claim 1 and 11 above, and further in view of Gusler (US 7,058,565).

Consider claims 4 and 14: Strubbe discloses the statement-response database includes at least one list of response entries appropriate to a statement (**see Col. 24, lines 52-63, where Strubbe discusses the response generator selects a response**).

Strubbe and Karaali do not specifically disclose a ranked-list, however Gusler discloses a ranked-list (see Col. 6, lines 55-65, where Gusler discusses ranking search results and listing according to the ranking). It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Strubbe and Karaali, and use a ranked-list as taught by Gusler, thus utilizing key words in speech to improve customer service, as discussed by Gusler (see Col. 1, lines 45-50).

Consider claims 5 and 15: Strubbe discloses the statement-response database includes at least one list of response entries related to prior conversations with a specific user (see Col. 14, lines 1-10, where Strubbe discusses previous conversation).

Strubbe and Karaali do not specifically disclose a ranked-list, however Gusler discloses a ranked-list (see Col. 6, lines 55-65, where Gusler discusses ranking search results and listing according to the ranking). It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Strubbe and Karaali, and use a ranked-list as taught by Gusler, thus utilizing key words in speech to improve customer service, as discussed by Gusler (see Col. 1, lines 45-50).

9. Claims 9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strubbe (US 6,721,706) in view of Karaali (US 6,182,028) as applied to claim 1 and 11 above, and further in view of Takebayashi (US 5,357,596).

Consider claims 9 and 19: Strubbe discloses the conversation strategy comprises: negotiating an identity of a current enquirer (see Col. 13, lines 20-30); negotiating a meaning

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of a current query (**see Col. 20, lines 25-35**); and, negotiating a conclusion to a current conversation.

Strubbe and Karaali do not specifically disclose a conclusion, however Takebayashi discloses a conclusion (**see Col. 29, lines 43-48, where Takebayashi discusses the end of the dialogue**). It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Strubbe and Karaali, and use a conclusion as taught by Takebayashi, thus providing a system capable of natural and smooth dialogue, as discussed by Takebayashi (**see Col. 3, lines 15-20**).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin E. Gaddy whose telephone number is (571) 270-5134. The examiner can normally be reached on M-TH 9am - 4pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Benjamin E. Gaddy

/Benjamin E Gaddy/

Examiner, Art Unit 4181

/Nick Corsaro/

Supervisory Patent Examiner, Art Unit 4181